

**AMENDMENT**

**IN THE CLAIMS**

Please amend the claims as indicated in Appendix A submitted herewith according to the proposed revision to 37 C.F.R. §1.121 concerning a manner for making claim amendments.

**REMARKS**

Claims 1-2, 4-8 and 15-34 are presently pending in the captioned application with claims 1-2 and 7 amended, claims 3 and 9-14 cancelled without disclaimer or prejudice, claims 15-34 as previously added and claims 4-6 and 8 as originally pending.

The Examiner states in item 11 of the Action that claims 6-8 are allowed. The Examiner also states in item 10 that claims 15-20 are objected to but would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claim.

Applicants acknowledge both indications of allowability with appreciation. However, Applicants would like to point out that all of claims 15-20 depend from claims 6-8, which have been allowed. Therefore, claims 15-20 do not need to be rewritten into independent form. Accordingly, Applicants respectfully request the Examiner to remove the objection against claims 15-20 and allow

claims 15-20.

On the other hand, claims 1 and 2 have been amended to contain the limitations of now deleted claim 13 and 14, respectively.

Claim 7 has been amended as to informalities to recite "a" rather than "an" in line 7 of the claim.

No new matter within the meaning of § 132 has been added by any of the amendments.

Applicants also enclose herewith a request to correct the filing receipt.

Accordingly, Applicants respectfully request the Examiner to enter the amendments, reconsider the rejections over the art and allow all claims pending in this application.

**1. Request for Certified Copy of Priority Document**

The Office Action acknowledges Applicants' claim for foreign priority based on an application filed in Japan on May 22, 2003, but requests a certified copy of Japanese application 2000-150343 alleged to be required under § 119(b).

Applicants respectfully traverse the request because § 119(b) only requires that a **claim** for priority be made wherein the claim itself must identify the foreign application by specifying the

application number of the foreign application, the intellectual property authority and the date of filing of the application.

However, Box No. VI (Priority claim) on page 4 of PCT/RO/101 submitted with the original filing identifies Japanese application 2000-150343 filed on May 22, 2000. Moreover, as indicated in the checked box of Box No. VI, the Japanese receiving office was already requested to prepare and transmit to the International Bureau a certified copy of Japanese application 2000-150343, which then should have been transmitted to the U.S. Patent Office.

Accordingly, Applicants have satisfied their obligation under § 119(b) and respectfully request the Examiner to reconsider and withdraw the request for a certified copy of the foreign priority document.

**2. Provisional rejection of Claims 1-2 and 4-5**  
**under the doctrine of obviousness-type**  
**double patenting**

The Office Action provisionally rejects claims 1-2 and 4-5 under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 and 13 of co-pending U.S. Patent Application No. 09/958,666. The Office Action states:

Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims

recite a crystalline mixture solid composition comprising  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol, and 0.01 to 1.99 wt%  $\alpha$ -D-glucopyranosyl-1,1-sorbitol (claim 1), whereas the claims in the copending '666 application recite a crystalline mixture solid composition comprising the same components, with the exception that the  $\alpha$ -D-glucopyranosyl-1,1-sorbitol is present in an amount of from 2 to 25 wt.% (claim 1 of the '666 application). The value of 2 wt.% of the '666 application is considered to read upon the instantly claimed 1.99 wt.%.

Further, the percentage ranges for  $\alpha$ -D-glucopyranosyl-1,1-mannitol and  $\alpha$ -D-glucopyranosyl-1,6-sorbitol recited in claim 2 of the instant application are overlapped by the percentage ranges of these components respectively recited in claims 1 and 2 of the '666 application, e.g. 50-98 wt.% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol, versus 20-75 wt%, or 29-.5 to 75 wt% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol (claims 1 and 2 of the '666 application).

With respect to claims 4 and 5 of the instant application, the crystalline mixture solid composition recited therein comprises  $\alpha$ -D-glucopyranosyl-1,1-mannitol and  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and has a specific surface area of 0.1 to 5 m<sup>2</sup>/g, whereas claim 13 of the '666 application recites a crystalline mixture solid composition having specifically defined percentage amounts of  $\alpha$ -D-glucopyranosyl-1,1-mannitol and  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and having a specific surface area of 0.07 to 0.1 m<sup>2</sup>/g.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicants respectfully traverse the rejection. As stated in

the Response filed June 27, 2003, in Application no. 09/958,666, Applicants requested the Examiner to hold the provisional obviousness-type double patenting rejection in abeyance until Applicants' had an opportunity to amend the claim amendments of the captioned application.

Applicants have now amended claims 1 and 2 of the captioned application to contain the limitations of deleted claims 13 and 14, which are clearly unobvious over each other. Presently pending claims 1 and 2 of the captioned application contain the limitation:

a crystalline mixture solid composition comprising  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and **0.01 to 1.5 wt%** of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

On the other hand, claims 1 and 2 in Application no. 09/958,666 recite the limitation of

a crystalline mixture solid composition which comprises 20 to 75 wt% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol, 23 to 70 wt% of  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and **2 to 25 wt%** of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol (the above weight percentages are based on the total weight of  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-

sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

Although the Examiner alleges that the value of 2 wt% of Application no. 09/958,666 is considered to read upon the instantly claimed value 1.99 wt%, Applicants assert that a patentable difference exists between the presently claimed range of "0.01 to 1.5" over "2 to 25 wt%" claimed in Application no. 09/958,666.

Regarding the rejection over claim 4, Applicants note that claim 4 of the captioned application recites a crystalline mixture solid composition which is **thin scale** and comprises  $\alpha$ -D-glucopyranosyl-1, 1-mannitol and  $\alpha$ -D-glucopyranosyl-1, 6-sorbitol. Nowhere in any of claims 1-2 and 13 of Application no. 09/958,666 is there recited a "thin scale".

Regarding claim 5 of the captioned application, Applicants note that claim 5 recites a specific surface area of 0.1 to 5.0 m<sup>2</sup>/g whereas claim 13 of Application no. 09/958,666 recites a specific surface area of 0.07 to 0.1 m<sup>2</sup>/g, which is both outside the presently claimed range and an unobvious variant of the claimed range for a specific surface area. Clearly, the cited ranges of claims 1-2 and 4-5 of the captioned application are unobvious over the ranges of claims 1-2 and 13 of Application no. 09/958,666.

Accordingly, Applicants respectfully request the Examiner to withdraw and remove the outstanding provisional rejection.

**3. Rejection of Claims 1-2 and 4-5**  
**under 35 U.S.C. § 102(e)**

The Office Action rejects claims 1-2 and 4-5 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,458,400 ("Willibald-Ettle et al."). The Office Action states:

Willibald-Ettle et al. teach a sweetener comprising 10 to 50 % by weight 1,6-GPS, 2-20 % weight of 1,1-GPS, and 30 to 70 % by weight of 1,1-GPM, based on the total dry matter content of the sweetener mixture. See col.2, lines 51-63 of Willibald-Ettle et al.

The minimal amount of 1,1-GPS, 2 % by weight, is considered to inherently anticipate the amount of 1.99 wt. % 1,1-GPS recited in the instant claims. Additionally, the specific surface area recited in the claim 5 is considered to be inherently taught by Willibald-Ettle et al.

In view of these teachings, Willibald-Ettle et al. anticipate claims 1, 2, 4, and 5.

Applicants respectfully traverse the rejection because Willibald-Ettle et al. fails to expressly teach the presently claimed range of 0.01 to 1.5 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol ("GPS-1"). Furthermore, Willibald-Ettle et al. fails to teach crystalline compositions and instead teaches amorphous glass-like solids.

Turning to the rule, the Federal Circuit has spoken clearly and at some length on the question of anticipation. Anticipation

requires that each and every element of the claimed invention be disclosed in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Those elements must be expressly disclosed as in the claim. In re Bond, 15 USPQ2d 1566 (Fed. Cir. 1990).

The prior art reference must also be enabling, thereby placing the allegedly disclosed matter in the possession of the public. In re Brown, 329 F.2d 1006, 1011, 241 USPQ 245, 249 (C.C.P.A. 1964). In order to accomplish this, the reference must be so particular and definite that from it alone, without experiment or the exertion of his own inventive skill, any person versed in the art to which it pertains could construct and use it. Id. at 250.

In the present application, the independent claims contain the limitation of a **crystalline** solid composition which comprises

$\alpha$ -D-glucopyranosyl-1,1-mannitol,

$\alpha$ -D-glucopyranosyl-1,6-sorbitol, and

0.01 to 1.5 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol.

Willibald-Ettle et al., however, does not expressly teach the claimed range of 0.01 to 1.5 wt% or that the presently claimed composition is a **crystalline** solid composition.

Instead, Willibald-Ettle et al. teaches a sweetener containing 2 to 20 wt% of 1  $\alpha$ -D-glucopyranosyl-1,1-sorbitol ("GPS-1"). See Willibald-Ettle et al. at col. 2, lines 50-56. Willibald-Ettle et



al. also teaches that the technical problem underlying the invention is to prepare confections having improved solubility and **reduced re-crystallization** by providing confections having no less than 1% of GPS-1. See id. at col. 2, lines 31-39. In contrast, the presently claimed composition contains GPS-1 in an amount of not more than 1.5 wt% as recited in presently amended claims 1 and 2.

Although the taught range of "not less than 1%" overlaps with the claimed range of "not more than 1.5% range", Willibald-Ettle et al. fails to teach the critical limitations of crystalline compositions. All Willibald-Ettle et al. teaches is an amorphous product produced by the evaporation of water from a sugar mixture or sugar substitute mixture, which is then concentrated to a dry matter content of no less than 95 % by weight. See Willibald-Ettle et al. at col. 3, lines 53-57. But as noted in the specification, the crystalline nature of the claimed invention imparts useful and unexpected properties to sweeteners.

In particular, the crystalline nature of the presently claimed invention results in low adhesion, low hygroscopicity, heat resistance, acid resistance, alkali resistance, excellent processability such as tablettability and granulability as well as possessing outstanding physiological properties such as low calorie content, being non-carcinogenic and having non-irritating insulin

properties. Clearly, the presently claimed invention has not been anticipated by Willibald-Ettle et al.

Accordingly, Applicants respectfully submit that the presently claimed invention is not anticipated by Willibald-Ettle et al. and respectfully request the Examiner to reconsider and withdraw the § 102(b) rejection.

**3. Rejection of Claims 1-2, 4-5, 13-14 and 32-34**  
**under 35 U.S.C. § 103(a)**

The Office Action rejects claim 1-2, 4-5 13-14, and 32-34 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,103,894 ("Degelmann et al."). The Office Action states:

Degelmann et al. teach a process for the hydrogenation of sugars selected from the group consisting of isomaltulose, leucrose, trehalulose maltulose, and lactulose to sugar alcohols (col. 1, line 52 to col. 2, line 37). The hydrogenation of isomaltulose can result in a composition comprising 1,1-GPM and a mixture of 1,6-GPS and 1,1-GPS in percentage ranges comparable to that instantly claimed. See Examples 3 and 9, and Tables 5 and 13 of Degelmann et al.

Although the reference does not specifically disclose separate amounts of 1,6-GPS and 1,1-GPS in the mixture, one of ordinary skill in the art would expect that the amounts of these two components would read upon the instantly claimed percentage ranges, absent the showing of convincing evidence to the contrary. That

is, if 1,1-GPS is present in the mixture of 1,6-GPS and 1,1- GPS in an amount within the respectively claimed range, the remaining amount of the mixture comprises 1,6-GPS in an amount within the claimed range of 1 to 50 wt. % 1,6-GPS(e.g., claim 2).

Because Degelmann et al. is considered to read upon the claims in their present form, any attending properties of the claimed composition (e.g., specific surface area) are considered to be encompassed by composition of Degelmann et al. It is well settled that when a claimed composition appears to be substantially the same as a composition disclosed in the prior art, the burden is properly upon the applicant to prove by way of tangible evidence that the prior art composition does not necessarily possess characteristics attributed to the CLAIMED composition. In re Spada, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Circ. 1990); In re Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980); In re Swinehart, 439 F.2d 2109, 169 USPQ 226 (CCPA 1971).

With respect to product-by-process claims 21-34, "[A]ny difference by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the Examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct, not the Examiner to show that the same is a process of making". In re Brown, 173 USPQ 685 and In re Fessmann, 180 USPQ 324.

Product-by-process claims do not patentably distinguish the product of reference even though made by a different process. In re Thorpe, 227 USPQ 964.

Applicants respectfully traverse this rejection because all

the claimed limitations have not been taught by the cited reference. In particular, Degelmann et al. only teaches liquid compositions obtained by hydrogenating a mixture of isomaltulose and trehalulose. Degelmann et al. also fails to teach solid crystalline compositions containing the claimed components. Even assuming *arguendo* that a *prima facie* case exists, the unexpected advantages of the solid crystalline composition over the liquid form impart patentability onto the presently pending claims.

Turning to the rule, the Federal Circuit held that a *prima facie* case of obviousness must establish: (1) some suggestion or motivation to modify the references; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all claim limitations. Amgen, Inc. v. Chugai Pharm. Co., 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); In re Fine, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 USPQ 494, 496 (C.C.P.A. 1970).

A *prima facie* case of obviousness must also include a showing of the reasons why it would be obvious to modify the references to produce the present invention. See Ex parte Clapp, 277 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). The Examiner bears the initial burden to provide some convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings. Id. at 974.

In the present application, the independent claims contain the

limitation of a **crystalline** solid composition which comprises

$\alpha$ -D-glucopyranosyl-1,1-mannitol,

$\alpha$ -D-glucopyranosyl-1,6-sorbitol, and

0.01 to 1.5 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol.

Degelmann et al., however, does not teach a solid crystalline composition but rather a liquid form used to solve the technical problems of process flow, handling of catalysts and reducing process costs over known methods of hydrogenating a sugar to sugar alcohol. See Degelmann et al. at col. 1, lines 46-48.

In particular, Degelmann et al. teaches a process for hydrogenating a sugar to a liquid, aqueous sugar alcohol by contacting sugar with hydrogen in an aqueous solution at elevated temperatures and then in the presence of a catalyst. Nowhere does Degelmann et al. provide any disclosure related to a solid, crystalline product of the presently claimed invention.

Although Degelmann et al. teaches broad ratios, the specifically claimed range are unobvious because the claimed limitations are not result-effective variables for producing a crystalline product having the unexpectedly superior properties of low adhesion, low hygroscopicity, heat resistance, acid resistance, alkali resistance, excellent processability such as tablettability and granulability as well as possessing outstanding physiological properties such as low calorie content, being non-carcinogenic and

having non-irritating insulin properties. See In re Antoine, 195 UPSQ 6 (C.C.P.A. 1977). The understanding that a particular ratio of the claimed components gives rise to crystallized solid having desirable properties was unobvious at the time the invention was made and in view of Degelmann et al.

Applicants note that any possible admonition that it would have been "obvious to try" to crystallize the sugar alcohol of Degelmann et al. is improper. This is because in some cases, what would have been "obvious to try" would have been to vary all parameters or try each of numerous choices until one possibly arrived at a successful result. Since Degelmann et al. fails to provide any indication that the claimed limitations result in improved properties for solid sweeteners, it would not have been obvious to try to make a crystallized solid composition incorporating the claimed limitations. See In re O'Farrell, 853 F.2d 894, 903, U.S.P.Q.2d 1673, 1681 (Fed. Cir. 1988).

Accordingly, a *prima facie* case of obviousness has not been established. Degelmann et al. cannot be applied against the presently claimed invention and there simply is no suggestion in the prior art at the time the invention was made that the claimed limitations result in an improved sweetener.

Accordingly Applicants respectfully submit that the presently claimed invention is unobvious over the cited reference and


respectfully request reconsideration and withdrawal of the rejections under § 103.

### CONCLUSION

In light of the foregoing, Applicants submit that the application is now in condition for allowance. The Examiner is therefore respectfully requested to reconsider and withdraw the rejection of the pending claims and allow the pending claims. Favorable action with an early allowance of the claims pending is earnestly solicited.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: ) Group Art Unit: 1755  
)  
UENO; TABATA; HONDA; FURUKAWA; ) Examiner: Patricia L Hailey  
ARAI )  
)  
Serial No. 10/030,981 )  
)  
Filed: January 16, 2002 )  
  
For: CRYSTALLINE MIXTURE SOLID COMPOSITION AND PREPARATION  
THEREOF

Appendix A

Please amend the following claims according to the proposed revision of 37 C.F.R. §1.121 concerning a manner for making claim amendments.

1. (Currently Amended) A crystalline mixture solid composition comprising  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and ~~0.01 to 1.99 wt%~~ 0.01 to 1.5 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

2. (Currently Amended) A crystalline mixture solid composition comprising 50 to 98 wt% of  $\alpha$ -D-glucopyranosyl-1,1-



mannitol, 1 to 50 wt% of  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and ~~0.01 to 1.99 wt%~~ 0.01 to 1.5 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

Claim 3 (canceled)

B1 4. (Original) A crystalline mixture solid composition which is thin scale and comprises  $\alpha$ -D-glucopyranosyl-1,1-mannitol and  $\alpha$ -D-glucopyranosyl-1,6-sorbitol.

5. (Original) The crystalline mixture solid composition of claim 4 which has a specific surface area of 0.1 to 5.0 m<sup>2</sup>/g.


6. (Original) A process for producing a crystalline mixture solid composition, comprising the steps of supplying a composition comprising 50 to 80 wt% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol, 1 to 50 wt% of  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and 0.01 to 20 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol into a kneader to knead and cool it so as to produce a composition, mixing the

composition with a hydrophilic solvent, and separating solid matter from a liquid (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

7. (Currently Amended) A process for producing a crystalline mixture solid composition, comprising the steps of supplying a composition comprising 50 to 80 wt% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol, 1 to 50 wt% of  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and 0.01 to 20 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol into ~~an~~ a kneader having a thin and long cooling/kneading zone to knead and cool it, extruding the kneaded product through a punching plate, cooling and grinding the extruded molded product to produce a powdery crystalline mixture solid composition, mixing the composition with a hydrophilic solvent, and separating solid matter from a liquid (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

8. (Original) A process for producing a crystalline mixture solid composition, comprising the steps of mixing a

hydrophilic solvent with an aqueous solution which comprises 50 to 80 wt% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol, 1 to 50 wt% of  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and 0 to 20 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol, and separating the formed precipitate from a liquid (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

 Claims 9-14 (Canceled)

15. (Previously Added) The process for producing a crystalline mixture solid composition according to claim 6, wherein the hydrophilic solvent is ethanol.

16. (Previously Added) The process for producing a crystalline mixture solid composition according to claim 7, wherein the hydrophilic solvent is ethanol.

17. (Previously Added) The process for producing a crystalline mixture solid composition according to claim 8, wherein the hydrophilic solvent is ethanol.

18. (Previously Added) The process for producing a crystalline mixture solid composition according to claim 6, wherein the hydrophilic solvent is an ethanol aqueous solution having a concentration of 60 to 90 %.

19. (Previously Added) The process for producing a crystalline mixture solid composition according to claim 7, wherein the hydrophilic solvent is an ethanol aqueous solution having a concentration of 60 to 90 %.

20. (Previously Added) The process for producing a crystalline mixture solid composition according to claim 8, wherein the hydrophilic solvent is an ethanol aqueous solution having a concentration of 60 to 90 %.

21. (Previously Added) The crystalline mixture solid composition of claim 1 produced by a process comprising the steps of supplying a composition comprising 50 to 80 wt% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol, 1 to 50 wt% of  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and 0.01 to 20 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol into a kneader to knead and cool it so as to produce a composition, mixing the composition with a hydrophilic solvent,

and separating solid matter from a liquid (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

By *Ant* 22. (Previously Added) The crystalline mixture solid composition of claim 1 produced by a process comprising the steps of supplying a composition comprising 50 to 80 wt% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol, 1 to 50 wt% of  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and 0.01 to 20 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol into a kneader having a thin and long cooling/kneading zone to knead and cool it, extruding the kneaded product through a punching plate, cooling and grinding the extruded molded product to produce a powdery crystalline mixture solid composition, mixing the composition with a hydrophilic solvent, and separating solid matter from a liquid (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

23. (Previously Added) The crystalline mixture solid composition of claim 1 produced by a process comprising the

steps of mixing a hydrophilic solvent with an aqueous solution which comprises 50 to 80 wt% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol, 1 to 50 wt% of  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and 0 to 20 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol, and separating the formed precipitate from a liquid (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

*(31)*  
*cont*

24. (Previously Added) The crystalline mixture solid composition of claim 2 produced by a process comprising the steps of supplying a composition comprising 50 to 80 wt% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol, 1 to 50 wt% of  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and 0.01 to 20 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol into a kneader to knead and cool it so as to produce a composition, mixing the composition with a hydrophilic solvent, and separating solid matter from a liquid (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

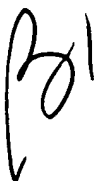
25. (Previously Added) The crystalline mixture solid

composition of claim 2 produced by a process comprising the steps of supplying a composition comprising 50 to 80 wt% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol, 1 to 50 wt% of  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and 0.01 to 20 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol into a kneader having a thin and long cooling/kneading zone to knead and cool it, extruding the kneaded product through a punching plate, cooling and grinding the extruded molded product to produce a powdery crystalline mixture solid composition, mixing the composition with a hydrophilic solvent, and separating solid matter from a liquid (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

26. (Previously Added) The crystalline mixture solid composition of claim 2 produced by a process comprising the steps of mixing a hydrophilic solvent with an aqueous solution which comprises 50 to 80 wt% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol, 1 to 50 wt% of  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and 0 to 20 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol, and separating the formed precipitate from a liquid (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-

glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

27. (Previously Added) The crystalline mixture solid composition of claim 21 which comprises 0.01 to 1.5 wt%  $\alpha$ -D-glucopyranosyl-1,1-sorbitol.

 28. (Previously Added) The crystalline mixture solid composition of claim 22 which comprises 0.01 to 1.5 wt%  $\alpha$ -D-glucopyranosyl-1,1-sorbitol.

29. (Previously Added) The crystalline mixture solid composition of claim 23 which comprises 0.01 to 1.5 wt%  $\alpha$ -D-glucopyranosyl-1,1-sorbitol.

30. (Previously Added) The crystalline mixture solid composition of claim 24 which comprises 0.01 to 1.5 wt%  $\alpha$ -D-glucopyranosyl-1,1-sorbitol.

31. (Previously Added) The crystalline mixture solid composition of claim 25 which comprises 0.01 to 1.5 wt%  $\alpha$ -D-glucopyranosyl-1,1-sorbitol.



32. (Previously Added) The crystalline mixture solid composition of claim 26 which comprises 0.01 to 1.5 wt%  $\alpha$ -D-glucopyranosyl-1,1-sorbitol.

33. (Previously Added) The crystalline mixture solid composition of claim 4 produced by a process comprising the steps of mixing a hydrophilic solvent with an aqueous solution which comprises 50 to 80 wt% of  $\alpha$ -D-glucopyranosyl-1,1-mannitol, 1 to 50 wt% of  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and 0 to 20 wt% of  $\alpha$ -D-glucopyranosyl-1,1-sorbitol, and separating the formed precipitate from a liquid (the above wt% is based on the total weight of the  $\alpha$ -D-glucopyranosyl-1,1-mannitol,  $\alpha$ -D-glucopyranosyl-1,6-sorbitol and  $\alpha$ -D-glucopyranosyl-1,1-sorbitol).

34. (Previously Added) The crystalline mixture solid composition of claim 33 which has a specific surface area of 0.1 to 5.0 m<sup>2</sup>/g.

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